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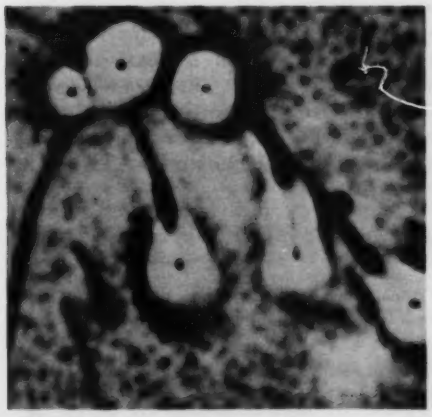
Family Planning Digest

A Publication of the National Center for Family Planning Services, Health Services and Mental Health Administration, U.S. Department of Health, Education and Welfare.

Study Shows Freezing Sperm Decreases Conception Rate; Continued Research Urged

Long-term freezing of human semen results in a large decrease in sperm motility (and, therefore, in its usefulness for insemination); even short-term freezing produces a lower conception rate than when fresh semen is used, researchers at the University of Texas Medical School at Houston report.

Drs. Emil Steinberger and Keith D. Smith, writing in the *Journal of the American Medical Association*, note that, in general, the process of freezing and thawing reduces by half the motility of the spermatozoa in a specimen. Moreover, after three years, additional—and as yet unexplained—deterioration begins, further reducing the number of live spermatozoa in the semen. These results were obtained from an analysis of 1,764 vials containing 533 ejaculates provided by 207 donors, and stored in liquid nitrogen in the authors' sperm bank in Philadelphia. (The bank was closed in June 1971 because of relocation of the group.) They had previously reported that the majority of specimens stored four years or more had far lower motility levels than the average for those in short-term storage. [See: "Simpler Methods Boost Public Acceptance," *Digest*, Vol. 1, No. 3, 1972, p. 4.]



Living human spermatozoa.

The sperm count and motility of the semen samples before freezing are important factors in sperm motility after thawing, the investigators note. While, in general, less than 20 percent of the initial motility remained after five years in storage (the oldest specimen had been frozen for 98 months), those samples in which less than 60 percent of sperm were motile lost all motility after five years. Similarly, specimens with counts before freezing of less than 40 million sperm per ml of semen lost "virtually all" motility after three years. Surprisingly, the researchers write, samples with a very high prefreezing sperm count—greater than 200 million per ml—also suffered severely from prolonged freezing. In these cases, the secondary deterioration began, not after three years, but after 12 months. These high sperm-count samples showed lower motility after one year than samples in the 40-200 million sperm per ml range.

A range of 40-200 million sperm per ml of semen, along with high motility, seems necessary, therefore, for long-term storage, Drs. Steinberger and Smith write. But even in samples meeting these criteria, it is often the case that less than 25 percent of sperm are motile after three years. They conclude:

> if frozen sperm banks . . . are to become a reality, considerable refinement of the techniques will be in order. To our knowledge, only a few individuals have been inseminated with specimens stored longer than one year. Even fewer pregnancies have resulted. Consequently, additional information is necessary before the true medical and biological significance of human sperm banking can be placed in the proper perspective.

Table of Contents **Page**

Freezing Sperm Decreases Conception 1
1972 Birthrates Reach All-Time Low 2
NCFPS Director Calls for 'Second Generation' Services 3
Progestin-Only Orals Approved by FDA 4
Animal Vasectomy Findings Suggest Harm to Humans Is Minimal 5
How Many Women Need Subsidized Family Planning Services? 6
Extension Aides: New Manpower Source 7
Copper IUDs May Prevent Gonorrhea 8
Legal Abortion Complications Decline 8
Resources in Review 10
FDA Approves DES, Urges Limited Use 12
Canadian Family Planning Programs 12
Fertility Survey of British City Parallels U.S. Findings 13
Vasectomy Clinic Run by Ob-Gyns 14
Nurses Favor Giving Birth Control Facts 14
Age, Parity of Sterilized Women Fall 15
Credits 15
Job Opportunities 16

Both the National Medical Committee of Planned Parenthood-World Population and the Council on Population of the American Public Health Association had previously noted the inadvisability of relying on sperm banks for long-term fertility insurance, since there was question about the viability of sperm after long-term storage. [See: "MD Group Cautions Men on Semen Banks," *Digest*, Vol. 1, No. 5, 1972, p. 14.]

Artificial Insemination

A series of 107 attempts made by the researchers at artificial insemination (48 with fresh semen, 59 with frozen) of 74 women whose husbands manifested severe oligospermia (deficiency of sperm in the ejaculate) or azoospermia (absence of sperm) showed that even short-term freezing had a slight deleterious effect. With fresh semen (used within one to two-and-one-half hours after ejaculation), there were 35 pregnancies, or a 73 percent conception rate. With frozen semen (stored in liquid nitrogen up to 51 months, although only 12 specimens stored more than six months were used), 36 pregnancies occurred, a conception rate of 61 percent.

On the average, frozen sperm had to be inseminated for 5.3 cycles before conception occurred, compared with only 4.4 cycles for fresh sperm. The overwhelming majority of those women who did not conceive were found to have ovarian or tubal disease or both (found in 18 of 20 women examined by culdoscopy, out of 36 who failed to become pregant). There were 11 miscarriages (seven with frozen semen, four with fresh) and one tubal pregnancy (with fresh semen) in the series. Of the 59 live births, 36, or 61 percent, were boys. This skewed sex ratio has been found by several other investigators, but "no satisfactory explanation for a disturbed sex ratio is available," the authors observe. Only one fetal abnormality was found in a female in the series, and she was conceived after insemination with semen stored two months. Two older children in the same family, both normal, were conceived after inseminations with sperm stored one and two months.

The frozen sperm used in these attempts at artificial insemination lost much of its motility—an average of 44 percent. Because of this, Drs. Steinberger and Smith note the "necessity of the better quality semen (motility and count) required for conception when frozen semen is employed." While insemination with frozen semen "compares favorably with fresh semen . . . it appears that pregnancy may occur faster when fresh semen is employed." However, since the number of pregnancies resulting from use of semen stored more than six months is "exceedingly small," the researchers write that "our enthusiasm for long-term storage of semen should be tempered by caution."

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Fertility

1972 Birthrates Reach All-Time Low

The nationwide decline in numbers of births, birthrates and fertility rates noted in 1971 continued and intensified in 1972.

- In 1972, there were 3,256,000 births in the United States, about nine percent fewer than in 1971. This compares to a four percent decline in the number of births in 1971 from 1970. In 1971, some states, and even regions, showed no birth decline, or even a birth increase; but in 1972 the number of births declined in every state of the union.
- The birthrate in 1972 was 15.6 births per 1,000 population, the lowest annual rate ever observed in the United States, and about 10 percent lower than the rate of 17.3 recorded in 1971—itself a record low.
- The general fertility rate for 1972 was

73.4 births per 1,000 women of reproductive age (15-44), also the lowest on record, and 11 percent lower than the 1971 rate of 82.3. The previous low was 75.8 in 1936, during the Depression.

- The estimated total fertility rate—that is, the average number of births each woman would have in her lifetime if she continued to experience the age-specific birthrates for a particular year—was 2.03 in 1972, compared to 2.28 in 1971. The previous low—2.12—was also recorded in 1936. (A total fertility rate of 2.10 is considered a 'replacement level' of fertility—that is, the number of children required for each couple to replace themselves in the population, leading eventually to a population of stable size.)

The decrease in numbers of births from 1971 to 1972 was uneven throughout the country. The largest decreases were reported for the New England (11.5 percent), Middle Atlantic (10.4 percent) and Pacific (10 percent) states. These also had shown the largest birth declines in 1971 (six percent, 8.3 percent and 7.2 percent, respectively). The smallest declines were recorded by the West South Central (5.5 percent) and the Mountain (4.1 percent) states, both of which had shown actual increases in numbers of births in 1971 over 1970.

The decreases notwithstanding, the population increased by 1,294,000 persons in 1972, and is expected to continue to increase. This is largely because of a projected 10 percent increase between 1972 and 1975 in the numbers of women of childbearing age in the population. If current fertility rates were to continue, a stable population could be achieved in about 70 years.

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NCFPS Director Calls for 'Second Generation' Services: Involve Hospitals, Serve Teenagers, Improve Sex Education

"What's needed in the family planning field today are some innovative second generation ideas about service delivery to match the second generation contraceptive technology," Marjorie A. Costa, Director of DHEW's National Center for Family Planning Services (NCFPS), told *Digest*, as she assessed her first year's experience as chief of the major federal agency responsible for carrying out the President's and Congress' mandate to make subsidized family planning services available by 1975 to all low-income women who want them.

Among the special emphases for the immediate future, Miss Costa listed:

- greater involvement of hospitals in family planning,
- development of a uniform manpower training curriculum and uniform standards for accrediting nonprofessionals to work in family planning,
- development of a school sex education program with a family planning component,
- service to teenagers and
- service to minorities.

Hospital Involvement

The Center Director noted that family planning is a health service. The most effective contraceptive methods require medical prescription, and a complete physical examination, she said, is a prerequisite for such prescriptions. "Under these circumstances, the public and voluntary hospitals are among the 'principal resources' for the delivery of family planning services."

She pointed out that DHEW's Five-Year Plan, submitted to Congress in 1971, projected a service goal for hospitals of 2.5 million women in 1975, a fivefold increase from the estimated 500,000 women provided with services by hospitals in 1970.

NCFPS will work closely with the American Hospital Association, Miss Costa said, to broaden hospital involvement. This will complement the agency's efforts with the National Medical Association and the American Medical Association to make the private physician a more active partner in the family planning field. She questioned whether hospitals with ob-gyn departments should be accredited if they fail to provide family planning services.

The hospital has available or can make available, Miss Costa explained, all the resources needed for a good family planning program, including medical, social and educational services. "Family planning can be integrated quite readily into the gynecological, postnatal, pediatric, and maternal and child health clinics, in addition to its postpartum service." In regard to the latter, she said, "There is a built-in opportunity to reach men as well as women when both are likely to be receptive to family planning information."

The Director said that an NCFPS-sponsored meeting last February, which examined the teaching materials available to hospitals, was a first step in mobilizing greater hospital initiative in family planning. [For a description and assessment of some of these materials, see: "Resources in Review," p. 10.]

Manpower

As demands for services increased in the last few years, service providers were faced with the need to enlist and quickly train additional manpower to meet this demand, Miss Costa pointed out. In short order family planning specialists, physicians' assistants, nurses' aides and nurse-clinicians appeared on the clinic scene, she said, and they were an innovative response to an immediate need. But since manpower needs will continue to be pressing (some 90,000 part-time and full-time workers will be needed in family planning by 1975, exclusive of physicians, according to the Five-Year Plan) this off-the-cuff approach is no longer appropriate, she said. "The orderly and uniform development of manpower education and standards is essential."

Right now, for example, a family planning specialist in Los Angeles may receive nine months' training while a family planning specialist in another area may receive only two months' training. "My concern is not which is the correct training period, because I do not know, but that this training be standardized throughout the country. We must first analyze what the training and curriculum components should be for each category of manpower. Then we should be able to train men and women who would be certified to carry out specific functions common to family planning programs anywhere in the country. In effect, they would be another category of professional or specialist."

Miss Costa said she was planning meetings with various professional bodies such as the American Public Health Association and the American Nurses' Association to develop appropriate job definitions and curricula. She said she hopes that NCFPS "will be able to take a very active role in helping to develop training programs throughout the country which will be meaningful in developing careers."

Asked whether she thought people might think they are getting second-class attention if served by a nurse-clinician rather than a physician, the family planning program director replied: "The point of training people properly is so that they will be fully qualified to do the job. There already are reports that in some situations clients prefer the nonprofessionals when they are well-trained and have the respect of the physicians in charge."

Miss Costa said she welcomes the involvement of people in family planning who work in other government programs. She singled out the extension aides in the Department of Agriculture as the kind of additional personnel who could do a fine job of outreach if properly trained. She said her plans call for her agency to work closely with the Department of Agriculture and the Office of Education to broaden the avenues through which family planning might be brought to the attention of those outside the mainstream—especially to those in rural areas. [For details on extension aides, see p. 7.]

Service to Minorities

In this connection, Miss Costa said it was essential to redefine the concept of "minority." To illustrate, she told of her experience when visiting an outpost in Alaska. She was told that many Aleut Eskimos had families of 14 and 16 children with only the sketchiest and most intermittent health care. When she asked what was being done to serve the minorities in Alaska, she was told, "We don't have a black problem."

She emphasized that neither ethnic derivation nor numbers is an appropriate definition of minority. Rural people are a minority. Teenagers are a minority. American Indians are a minority. Working mothers are a minority. "Ways of communicating effectively with all the disparate groups in our society must be developed, with sensitivity to the particular needs and points of view of each," she said.

Sex Education

Miss Costa, who is a health educator, said she considered it a priority objective to get human sexuality included as part of the health education curriculum from preschool on through high school and college. "If youngsters are taught about sex and

family planning as naturally as they are taught how to brush their teeth or clean their ears, and the subject is incorporated in biology, in nature study, in economics, in math, in fact, the whole curriculum, then sex and family planning will be perceived as natural and wholesome. At puberty, boys and girls won't panic when their bodies tell them they are attracted to the opposite sex; it will be accepted as part of their development." She is convinced that parents won't object to such education if they are helped to see that sex education will help their children mature into responsible adults.

She said she "sees NCFPS playing a major role in instituting health education programs, including sex education and contraception."

Outreach

In her exploration of family planning programs, Miss Costa said she was struck by the fact that outreach efforts had largely become frozen into the formula: "train-indigenous-people-to-knock-on-their-neighbors'-doors-and-tell-them-they-have-too-many-children-and-there's-a-family-planning-clinic-around-the-corner." This approach was innovative in 1965. It no longer is, Miss Costa said.

She sees outreach as beginning with the careful selection of neighborhood workers. These, she said, need not come necessarily from the immediate community where the patients live, but they must have empathy with the local people and know how to communicate effectively with them. Selection should be followed by training sessions in which the workers are taught about family planning and the real meaning of "voluntary." They should be taught how to approach various people in the community with an awareness of their differing needs and outlooks.

She made the point that consumer participation and outreach have been perceived as separate entities, although all should be interrelated. The time has come, she observed, for greater selectivity in the recruitment of outreach workers, more carefully defined and sophisticated training programs, and more sensitivity for the people to be approached and the message to be brought to them. "Outreach should be perceived as a service to others and not primarily as a mechanism for giving jobs to people."

Miss Costa raps with teens at Planned Parenthood clinic in Pasadena, California.

Serving Teenagers

The NCFPS Director said that the sexually active teenager is among the priority groups to receive family planning services. "There is no question in my mind that we should have programs which are adolescent-geared." One of the problems in making services available to this group, she explained, is that state laws are not uniform in determining at what age services may be provided without parental consent. "I think this is a tragedy," she said, "but we, as agents of the federal government, cannot override state law."

Where provision of services to minors is legal without parental consent, she said, these services will receive priority support from NCFPS. She believes it is essential that personnel be comfortable in dealing with the special world and outlook of adolescents. She was impressed with a 'free clinic' on the West Coast where doctors and nurses dress as casually as their clients; where all staff members receive the same salary; and where all who seek service are served, with sympathetic understanding, regardless of age, ability to pay or the conditions for which they seek help.

In that clinic, Miss Costa said, she learned something of vital importance to everyone in the family planning field. She learned that even today, not everyone knows about family planning. For example, the architect who designed the free clinic, a woman, said it was not until after she had borne six children that she learned she could plan her family. And a woman physician in Puerto Rico who now works in family planning told Miss Costa she had not known about family planning until she had borne five children.

Minipills

Progestin-Only Orals Approved by FDA

The first progestin-only oral contraceptive—the 'minipill'—to be approved for use in the United States by DHEW's Food and Drug Administration (FDA) is being marketed by Syntex under the name of Nor-2D and by Ortho as Micronor. The 0.35 mg tablets, which contain only one active ingredient—the progestational agent norethindrone—is administered on a continuous daily basis throughout the year as long as contraception is desired.

In its announcement of the release of the new contraceptive, the FDA pointed out:

> experience to date indicates that the effectiveness of progestin-only oral contraceptives is lower than that of sequential or combination oral contraceptives containing both estrogen and progestin. The overall pregnancy rate with the conventional oral contraceptives is generally less than one pregnancy over 100 women-years, while with the progestin-only products approximately three pregnancies might occur per 100 women-years.

Drop-Out Rate Higher

The official notice also points out that the drop-out rate for medical reasons is higher among users of the minipill than for users of the combined pill, largely because of a "significant incidence of unpredictable bleeding patterns which may not follow any consistent pattern even after prolonged use."

These drawbacks notwithstanding, the minipill is regarded as useful because it contains no estrogen, the hormone in the combination and sequential pill associated with thromboembolism. Studies have not yet been done to determine if the progestin-only pills may have any association with thromboembolic disorders, as the combination pills have been shown to have, but it is known, according to the FDA, that about "eight percent of the degradation products of this synthetic progestogen become biologically active estrogens." The clinical significance of this is not known. [For a review of progestin-only contraception, see: "Bleeding, Pregnancy Problems Found in Five Minipills Tested," *Digest*, Vol. 2, No. 1, 1973, p. 10.]

Source

"FDA Approves New Oral Contraceptive," *FDA Drug Bulletin*, Dec. 1972, p. 3.

Male Sterilization

Animal Vasectomy Findings Suggest Physical, Chemical Changes in Humans Are Minimal

Recent research into the effects of vasectomy on the reproductive systems of several different experimental animals shows that significant physical changes take place after the sterilization operation is performed. Investigators have found that:

- In all species studied—rats, rabbits, hamsters and rhesus monkeys—swelling and, later, cyst-like lesions have been noticed in the different regions of the ducts leading from the testes, due to the accumulation of sperm, which continue to be produced.
- These phenomena are most pronounced in the lower animals, and least evident in the highest, the monkey.
- In the rats, there was a suggestion of a reduction in the output of testosterone.
- In one experiment which used immature rats (the other studies used mature animals) researchers found exceptionally large cysts and a shrinkage in the size of the testes.
- Despite the presence of lesions and swelling, a study of vasectomized rhesus monkeys showed no difference between their postoperative sexual behavior and that of monkeys who had undergone only a sham operation.

The degree of change observed varied from species to species. It is not certain whether any of these phenomena also occur in human males.

Dr. J. Michael Bedford, of the New York Hospital-Cornell Medical Center, studied all four of the animals—using 22 rabbits, 10 rats, 16 hamsters and nine rhesus monkeys. In all species, in the initial postvasectomy period, the vas deferens and epididymis became progressively enlarged with spermatozoa.

In the rabbit, both the vas and cauda epididymis (where sperm are stored, see Figure 1) became swollen, and by six months after the operation the latter, though still not ruptured, was often as large as the testis itself. Two months later, the epididymal duct was no longer intact, with lesions visible to the naked eye in the cauda, and occasionally in the corpus and caput. When the lesions appeared in the upper portions of the epididymis (and only then), Dr. Bedford noted, the testes were often somewhat shrunken and the lining of the germinal tissues atrophied. White blood cells, both leucocytes and phagocytes, were absent before ruptures took place, but were plentiful, mixed with the sperm, afterwards.

In the rat and (to a lesser degree) in the hamster, cysts containing spermatozoa often appeared at the point of vasal ligation as early as two months after vasectomy. Lesions in the cauda were frequently evident at this point (earlier than in the rabbit), and in the corpus and caput as early as three months after the operation. Lesions in these animals were generally larger than those observed in the rabbits, but otherwise conditions were similar.

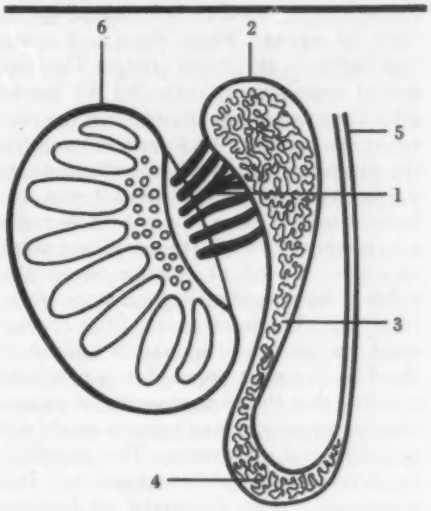
In the rhesus—which is a much closer relative of man than the other species—developments were different. While the cauda was hard and swollen three weeks postoperatively, the swelling had gone down two weeks later.

Microscopic examination of the tissues showed small lesions in the vas, however, and/or larger ones in the cauda, both containing a mixture of sperm and leucocytes. For all the species studied, Dr. Bedford concluded, leucocytes apparently do not enter the epididymis or vas until the continuity of the epithelial lining is destroyed. Since by this time the sperm cells have partially disintegrated, what the leucocytes and phagocytes actually ingest are sperm fragments—specifically the nucleus and thick tail fibers, which are nearly indigestible because of their keratinoid nature. When this happens, the swelling decreases as the cause is removed. The differences in how much swelling occurs in one species as opposed to another may depend on variations in how much the ducts of one animal will expand before rupturing as compared with another species.

The interaction of sperm and leucocytes causes the production of antibodies, but, because the leucocytes are actually ingesting only elements of the sperm, which probably do not contain the important autoimmune antigens, and not the whole cells, the antibodies produced generally should not be sperm-specific, Dr. Bedford noted. Autoimmune antibodies have been found in the ejaculate of vasectomized men and have been implicated, by some researchers, in possible secondary sterility occurring in a certain proportion of those vasectomized. [See: "Discuss Sterilization Advances, Problems," *Digest*, Vol. 1, No. 5, 1972, p. 9.]

These lesions and ruptures have not been noticed in man. Dr. Bedford told *Digest* he supposed that "in man, like the monkey, lesions may develop early and therefore are not major as in other species—due primarily to the physical characteristics of ductal tissue. Therefore, they would not appear superficially as a swelling." If they do occur in man, he added, "they would appear to be benign, since there have been few reports in the literature of significant pathology or interference with normal sexual function after millions of vasectomies the world over."

Figure 1. Schematic drawing of human epididymis and testis



1. Ductuli efferentes
2. Caput epididymis
3. Corpus epididymis
4. Cauda epididymis
5. Vas deferens
6. Testis

In one study, which dealt exclusively with immature rats, researchers headed by Dr. Arthur M. Sackler, a psychiatrist at New York Medical College, found more pronounced changes. Some 30 rats were vasectomized, 31 vasoligated and 27 others put through a sham operation. Cysts were seen in the cauda epididymis, and testes were often found to be reduced in size 28 weeks after the operation in those rats that had been vasectomized or vasoligated. A decrease in the amount of male hormonal metabolites was also found in the urine of these two groups 15 weeks after the operation, but not in the control group.

"Few of the animals" that were vasectomized or vasoligated "failed to exhibit cysts," the investigators reported, either in the cauda epididymis or in the vas, and, rarely, in the abdominal cavity. The cysts contained "hard, yellow and cheese-like debris," and ranged in size from minute to nearly an inch in length. The investigators speculated that the cysts might be related to "an inability [of the cauda and vas] to competently . . . remove the cellular debris arising from the accumulation and entrapment of fluid, live and dead spermatozoa, and degenerated materials."

The weight of the testes was significantly lower in the vasectomized and vasoligated rats (30.2 and 20.7 percent, respectively), than in the control group after 28 weeks. White blood cell count was higher in these two groups. The hormonal metabolites, collected 15 weeks after the operations, showed that the vasectomized rats had 18.4 percent less than the control group, and the vasoligated rats 7.3 percent less. The incisions "were performed under clean but not necessarily aseptic procedures." The use of immature rats has elicited skepticism about the value of this experiment from some quarters. ". . . The week point of the experiments is the use of immature animals," the *New Scientist* noted. "It is certainly possible that the consequences of vasectomy on young growing animals would not occur in mature tissues. This possibility demands urgent investigation." Researchers at the University of London reported that studies of 20 adult rats vasectomized for from one month to one year showed that 18 developed sperm-containing cysts and testosterone production was generally down. The reduction in testis size was not seen, however.

An extensive study of vasectomized rhesus monkeys (including some who had undergone the operation seven years previously) by Nancy J. Alexander at the Oregon Regional Primate Research Center revealed that after long periods the epididymis is essentially empty of sperm, and ingestion by phagocytes and leucocytes takes place in the ductuli efferentes, which also undergo marked changes.

In animals vasectomized two or more years, the ductuli efferentes increase two to four times in diameter, "undoubtedly because of being packed with spermatozoa." Ciliated cells, which normally make up half of the lining of the ductuli, "are greatly reduced in number; in some regions, they disappear entirely." As the ducts are stretched, the nonciliated cells become shorter, and the outer layer of the ducts' cells (basal lamina) more than triples in thickness. As time passes after vasectomy, antibodies that cause the sperm to clump begin to form so that, in animals which have been vasectomized for several years, sperm agglutinate in the ductuli efferentes, instead of in the cauda epididymis. The level of these antibodies increases with time, reaching several times its original level in monkeys vasectomized for seven years. The thickening of the basal lamina "may be directly related to the amount of antibody present," Alexander said.

Apart from physiological changes caused by vasectomy is the question of what effect it may have on the libido—whether the operation affects the male's virility. There have been some reports of depression and sexual dysfunction in men who have had a vasectomy, but it was unclear whether the cause was psychological or physiological.

Charles H. Phoenix, also at the Oregon Regional Primate Research Center, studied the sexual behavior of two groups of rhesus monkeys and then vasectomized one group while performing a sham operation on the other. The monkeys' sexual behavior after the operations was again studied, and the researcher "found no statistically significant differences in performance between the control group (after sham vasectomy) and experimental group (after vasectomy)," according to a report published in *Science*.

Twice a week, each male (wild-born, but in the laboratory for at least two and one-half years) was put into a large cage with a female (also wild-born, but in the lab for about five years) that had been primed with estrogen. The time until first mount, first intromission and ejaculation was measured, along with the frequency (per minute) of contact (defined as having the male place his hands on the female in the position they normally employ during intercourse), mounting, intromission and pelvic thrusting. While both groups showed slight changes after the operations, the direction of change was the same for both—lower rates for all frequencies, increased time until first mount and decreased time until first intromission and ejaculation—and no significant difference in the behavior of the groups was found.

The frequency of ejaculation also declined for both groups after the operation, but was again quite similar. Associated behavior—such as grooming, threatening, yawning and aggression—was also alike, as was the females' behavior toward the two groups.

The absence of any significant difference in performance, wrote Phoenix, suggests "that the changes reported in man are in fact psychological [and not physical] in origin." The primates studied, the investigator pointed out, "can be expected to be free of such emotions as guilt and castration and the many superstitions that often complicate sexual behavior in man. Moreover, changes in their sexual behavior after vasectomy cannot . . . be attributed to economic, social or cultural factors."

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Subsidized Family Planning

How Many Women Need Services?

How many poor and near-poor women of childbearing age need subsidized family planning services? Using data from the 1966 and 1967 Current Population Surveys and the 1965 National Fertility Study, the figure of approximately five million women in need of contraception (whether obtained through subsidized services or from other sources) was arrived at by various family planning specialists and demographers in 1967 and 1968, including Arthur A. Campbell, who is now Deputy Director of the Center for Population Research of the National Institute for Child Health and Human Development. This figure became the basis for program planning in the family planning field and for funding of programs by the federal government.

Judith Blake, of the University of California, and Prithwis Das Gupta, of the University of Minnesota, challenge Campbell's estimate that there were 4.6 million poor and near-poor women in 1966 in need of contraception, stating, in an article in *Demography*, that there were only 1.2 million who needed subsidized services and would use them if offered. The differences in the two estimates arise partially from different assumptions about the characteristics of the population, but come primarily from differences in definition of 'need'. Campbell defined as the universe of need all sexually active poor and near-poor women aged 15-44 who were not sterile, pregnant or seeking pregnancy. Blake and Das Gupta, however, deduct close to an additional two million they estimated were already practicing effective contraception (usually defined as 'met need'), and 667,000 they estimated to be opposed to family planning. [This estimate of those opposed—14.5 percent of all poor-near-poor married women—is based on the 1965 National Fertility

Study. Charles F. Westoff, however, has shown, using data from the later 1970 NFS, that less than four percent of couples have not used contraception because of "social or motivational reasons."]

Asked to comment on the wide discrepancy between the Blake-Das Gupta estimates and his own, Campbell took issue with their "implication" that his estimate of 4.6 million "was intended to represent unmet need for contraception in the same sense as their estimate of 1.2 million." He had, he said, "specifically disavowed any intention to represent the estimate as an indicator of unmet need for contraceptive services," and "did not deduct any allowance for women who were already receiving subsidized contraceptive services. . . ." Nor, he said, did he attempt "to estimate the number who would use such services if they were made available."

Using the same definition of need, there is still a difference of 800,000 between the two calculations. Both the Blake-Das Gupta and Campbell estimates begin with a total universe of 8.2 million poor and near-poor women in 1966. Blake and Das Gupta, however, deducted from this total 4.4 million women they estimate are not sexually active, are sterile, are pregnant or seeking a pregnancy, while Campbell deducted 3.6 million for these reasons.

Campbell pointed out that the largest discrepancy between his estimate of these deductions and theirs is in the number not sexually active. Blake and Das Gupta derive their figure of 2.2 million from the 1940s Kinsey survey of sexual behavior of American women (most of them white and middle-class), which estimated that the proportions of never-married women exposed to intercourse rose from 20 percent at ages 16-20 to 43 percent at ages 26-30. Campbell derived his much lower figure of 1.5 million not sexually active primarily from estimated illegitimacy figures for the years 1960-1965 of the poor and near-poor population. The 1971 Kantner-Zelnick study, he pointed out, of sexual behavior of unmarried women 15-19 living in low-income households shows that almost one-third had engaged in intercourse, with the proportion rising from 18.5 percent at age 15 to 53.6 percent at age 19. Campbell maintains that Blake and Das Gupta underestimated the extent of sexual activity among never-married women by at least 50 percent and, therefore, that their deduction of 2.2 million is much too large.

He concluded by observing:

> The number of women now served in publicly subsidized family planning clinics already exceeds the 1.2 million estimate of unmet need proposed by Blake and Das Gupta, despite the reduction in the poverty population that has occurred in the six years following the 1966 date to which their estimate relates. It seems unlikely that women who do not want or need the service would be using it.

Sources

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Training

Extension Aides: New Manpower

Agricultural extension aides—the more than 9,000 women across the country who provide nutritional and health guidance for 1.7 million people in low-income families—may become a major source of manpower for family planning education, according to an education specialist with the Department of Agriculture's Extension Service. Approximately 500 have received some family planning training, and many more are interested in receiving it.

A survey of a random sample of these aides revealed that not only do an overwhelming majority of them feel that their clients want and need family planning guidance, Jean Brand writes in a recent issue of the *Journal of Extension*, but most of them would be happy to help if they were given the proper training. In fact, nearly two-thirds of the 365 aides who responded to the survey in time for tabulation said they had already been asked for family planning or birth control advice by women or girls in the families they serve through the Expanded Food and Nutrition Education Program. "In many localities, with or without official sanction, they're giving answers," Brand says.

Although the program initially dealt only with nutrition, it soon included sanitation, money management, child care and health—matters that "were inseparable from the total setting of nutrition education," according to the author. Family planning cannot "be divorced from the complex web of the low-income family's nutritional, economic, and social-psychological problems," any more than the other areas can be excluded, she adds.

Respondents ranged from 21 to 67 years old with a mean age of 42, had an average of 11.5 years of formal education, and an average of more than a year-and-a-half on the job. Three-fourths of the aides thought the women in the families with which they worked would like to learn more about family planning, and 93.7 percent said these women "*need* this information." Ninety-seven percent of the aides asked for family planning information by their clients said they gave some kind of advice when asked. Eighty percent of the time it was a referral to a doctor or clinic. More than two-fifths of the aides said they volunteered such information. The reasons their clients weren't presently using some method of birth control varied, but the most frequent answers were that they were "afraid it's dangerous," "they don't know how" or that "their man objects."

Not only should the women they serve learn about family planning, but almost nine out of 10 aides said the men should learn, too. "They need someone to explain how important it is, and that the number of children do not make you a man," one aide noted. They were quite willing to help—87 percent said they would teach their clients if they had the training, but 72 percent said they had no training in the field.

"Family planning can't be treated as a problem of the homemaker alone," Brand writes. "An educational program should also be developed to inform her male partner of the need and available methods of family planning. Teenage youth, both male and female, especially require birth control information to prevent the familial disasters so frequently reported by program aides."

Brand told *Digest* that a few programs have begun to train extension aides in

Aides are drawn from the communities they serve.

family planning, including those administered through Cornell University, the University of West Virginia and North Carolina State University. In the Cornell program, 18 aides from two nearby counties have received from 10 to 12 hours of instruction as part of a wider program of family planning and human sexuality education for all levels of Extension Service personnel. Funding originally came from the school and a Ford Foundation grant, but now federal and state Extension Service funds are being used.

In West Virginia, all of the state's 158 aides received a lecture in family planning and contraceptive techniques last May, as have new aides since then. The training is funded through the Extension Service.

The North Carolina program, begun last August, also funded through the Extension Service, has reached half of the state's 300-400 aides so far with one-day training sessions. Following direction, the aides refer their clients to appropriate family planning agencies.

Source

J. Brand, "Family Planning: Extension Aides See Need," *Journal of Extension*, Vol. 10, No. 3, 1972, p. 25, and personal communication.

Contraceptive Research

Copper IUDs May Prevent Gonorrhea

IUDs that contain copper may prevent their users from contracting gonorrhea, according to researchers at the Mount Sinai School of Medicine. In laboratory tests, the investigators, headed by Dr. John Swanson, now at the University of Utah College of Medicine, discovered that extremely small amounts of metallic copper or compounds such as copper sulfate and copper chloride can inhibit the growth and destroy colonies of gonococci in about 30 minutes.

The investigators note that IUDs containing copper reportedly lose their copper in a year or two. If only half of the copper is lost in uterine-cervical excretions (the rest being absorbed by the body), the researchers write, the concentration of copper in uterine and vaginal fluids will be higher than that which killed the gonorrhea bacilli in the laboratory tests. Whether this amount of copper ends up in the fluids and whether this concentration, which worked in the laboratory, also works in the body are questions that remain to be answered.

Source

B. Fiscina, G.K. Oster, G. Oster and J. Swanson, "Gonococcicidal Action of Copper *in vitro*," *American Journal of Obstetrics and Gynecology*, **116**: 86, 1973.

Abortion Statistics

Mortality, Morbidity in Legal Abortions Drop As Women Learn Early Procedures Safer

The principal factors responsible for mortality associated with legal abortion are the period of gestation at which pregnancies are terminated and the method used to terminate them, concludes Dr. Christopher Tietze of The Population Council, from analysis of data on abortion-related mortality in eight countries and two places in the United States where legal abortion was available either on request or on broadly interpreted medical indications. The study was made prior to the recent Supreme Court decision.

He found that in 1969-1970 mortality was more than three times higher in England and Wales following second-trimester abortion of resident women than after terminations in the first trimester. There were 12 deaths associated with 84,000 first-trimester abortions, producing a mortality ratio of 14 per 100,000 abortions; 18 deaths were associated with terminations of pregnancies of 13 weeks or more gestation, for a mortality ratio of 47. In New York City, the difference was even greater: Three deaths of resident women were associated with 111,200 first-trimester abortions (which represented 78 percent of all abortions) compared with eight deaths resulting from 31,300 second-trimester abortions—or mortality ratios of 2.7 and 26, respectively, per 100,000 abortions—a ratio of 10 to one.

Dr. Tietze found that Hungary and Czechoslovakia, where elective abortion is limited to the first trimester, had the lowest mortality ratios (1.2 and 2.6 per 100,000, respectively) of all countries, while Sweden, which he described as typical of the Scandinavian countries, and England and Wales had the highest percentage of second-trimester abortions, and much higher mortality ratios (18 in both)—seven to 15 times higher—than the eastern European countries and Japan (where 95 percent of elective abortions were performed in the first trimester, and the mortality ratio was 3.4 in 1965-1968).

Termination Method

The method used to terminate pregnancy, the physician found, is a central determinant of abortion-related mortality. The mortality ratio for hysterotomy and hysterectomy (64 per 100,000) in England and Wales was four times higher than that associated with D&C (14) and suction (15), which are far less complicated procedures. In New York City, where hysterotomy is much less frequently performed to terminate pregnancy than in Britain, the difference is of even greater magnitude (235 per 100,000 for hysterotomy, compared with 2.8 for D&C and 1.2 for suction among resident women). Dr. Tietze believes that the much higher mortality among resident women associated with hysterotomy in New York is probably due to the fact that the operation is rarely performed routinely, but is the procedure of choice for patients with preexisting conditions, such as diseases of the cardiovascular system or of the kidneys, for whom the saline method—associated with 23 deaths per 100,000 women—is contraindicated. Dr. Tietze observes:

> The much higher rates, for both the first and second trimester of pregnancy, reported from England, compared with New York City, . . . reflect the large number of hysterotomies and hysterectomies in England, where these procedures were used in more than 10 percent of all abortions in the first trimester and in more than 40 percent in the second trimester. In New York City, hysterotomy was rarely used in the first trimester and accounted for only three percent of all abortions in the second trimester.

He described the number of abortions by hysterectomy in New York City as "negligible."

The physician notes that the "much higher" mortality with suction in England is associated with the fact that the procedure had been combined with tubal sterilization in three of the seven deaths reported. He cautions that the mortality ratio for D&C is not entirely comparable with New York City's because the English data include 13 percent of abortions by other methods, including injection of utus paste into the uterus, which was responsible for at least two of the seven deaths.

Dr. Tietze, along with other experts, believes that the performance of major surgery in association with abortion "contributed materially" to the higher mortality in England and Wales, and he notes:

> in 1970 only two deaths were reported among 45,000 first-trimester abortions without concurrent sterilization, most of which were accomplished by either vacuum aspiration or D&C, corresponding to a mortality ratio of 4.4 per 100,000 procedures which is only slightly higher than the comparable ratios reported from eastern Europe and . . . from New York City.

More women are having safe, early abortions, many in clinics such as the one pictured above.

Abortion-Related Mortality in New York City

In an attempt to pinpoint abortion-related mortality in New York City, where 402,000 terminations were performed between mid-1970 and mid-1972 (65 percent of them on nonresidents), a mail survey of all 20,336 obstetrician-gynecologists in the United States was combined with a study of all relevant health department records in a joint undertaking of The Population Council, the city's Department of Health and DHEW's Center for Disease Control. More than half (54 percent) of the physicians surveyed responded to the inquiry, which sought to discover any deaths, especially among nonresident women, which might have escaped the attention of the local New York health officials. Of the total of 20 deaths resulting from legal abortion, only two were previously unknown. The overall mortality ratio, the investigators found, was five per 100,000—7.7 for residents and 3.5 for nonresidents.

The lower rate among nonresidents is attributed by the investigators in part to the higher proportion of first-trimester abortions in this group and in part to the larger proportion of resident women with preexisting medical complications. "Women with bona fide medical indications," they observe, "would find it possible to obtain therapeutic abortions in their home states while women residing in some states and seeking elective termination . . . under legal auspices could do so only in New York."

Mortality was nine times higher for abortions at 13 or more weeks' gestation than for those done at 12 or fewer weeks. "This finding," say the investigators, "lends urgency to the twin tasks of making women aware that the earlier the abortion the safer the procedure, and of providing adequate facilities to serve without unnecessary delay women requesting early termination."

Suction was associated with the lowest mortality (1.1 per 100,000 abortions), followed in ascending order by D&C (2.4), saline instillation (18.8) and hysterotomy (208.3). These ratios are based on the combined experience of resident and nonresident women. Ten of the 20 deaths occurred during the first year, mid-1970 to mid-1971, when 173,900 legal abortions were performed, and 10 during the second year, when 228,100 were performed. Thus, the mortality ratio declined from 5.8 to 4.4 per 100,000 abortions over the two years.

The National Picture

In 1971, the most recent year for which nationwide figures on abortion are available, 480,259 legal abortions were reported to the Center for Disease Control from 24 states and the District of Columbia. Highlights from this abortion surveillance report include the following:

- Twenty-nine percent of legal abortions were performed on women less than 20 years old.
- By race, 79.2 percent of women obtaining legal abortions were white, 18.9 percent black or "other", 1.9 percent unknown. Race-specific ratios suggest that white women were about as likely to obtain legal terminations as were nonwhite women.
- Approximately two-thirds of legal abortions were performed on single, widowed, separated or divorced women.
- About 84 percent of reported abortions were performed by suction or D&C.
- Just under 80 percent of abortions were performed in the first trimester of pregnancy.
- There were 136 legal abortions reported per 1,000 live births, almost three times more than in 1970, when there were 48.4 per 1,000 live births.
- By method, suction and D&C increased from 75.5 percent in 1970 to 83.6 percent in 1971, while first-trimester abortions increased from 75.6 percent to 78.4 percent.
- In 1971, 79 percent of the total number of reported legal abortions were performed in two states, New York (55 percent) and California (24.3 percent). The areas with the highest abortion ratios by place of residence were Washington, D.C. and New York State. Women residing in Utah and Idaho obtained only two legal abortions per 1,000 live births, with all reported abortions occurring in other states. In 1971, 38.7 percent of reported legal abortions were performed in states outside the woman's state of residence —85 percent of them in New York. Five areas reported more than 10 percent of their abortions on out-of-state residents: Kansas (60.8 percent), New York (60 percent), District of Columbia (36.3 percent), Wisconsin (32.5 percent) and California (11.2 percent).

Although Maine, New Hampshire and Rhode Island reported no legal abortions performed in those states, more than 4,000 of their residents obtained legal abortions elsewhere. Similarly, no legal abortions were reported from New Jersey, but 21,207 New Jersey women obtained abortions outside their state of residence. Of the seven states comprising the West North Central Region, only Kansas reported some 3,000 legal abortions. Minnesota, Iowa, Missouri, North and South Dakota and Nebraska reported no legal abortions. Nonetheless, about nine thousand residents of these states did obtain legal abortions elsewhere. The same phenomenon occurred in all nine regions.

Commenting on the abortion surveillance report findings at the American Public Health Association annual meeting, Dr. Carl W. Tyler, Chief of Family Planning Evaluation of the Center for Disease Control, pointed out that reports from various parts of the United States show a "steady decline" in levels of abortion-related maternal morbidity and mortality since the availability of legal abortion. Estimating that the demand for legal abortion would reach about two million a year in the mid-1970s, Dr. Tyler called for increased research into new methods of performing abortion, greater attention to the associated medical needs of women undergoing induced abortion, and examination of current mechanisms of financing health care which, he said, "do not now provide adequate coverage for women in need. . . ."

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C. Tietze, J. Pakter and G.S. Berger, "Mortality Associated with Legal Abortion in New York City, 1970/1972: A Preliminary Report," *Journal of the American Medical Association*, 1973 (in press).

C.W. Tyler, Jr., "Abortion: Need, Impact and Problems," paper presented at the centennial annual meeting of the American Public Health Association, Atlantic City, N.J., Nov. 16, 1972.

Resources in Review

By Dorothy L. Millstone

A rich crop of resource materials came to light early in February as hospital family planning specialists from all over the United States assembled in Columbia, Maryland to discuss patient education strategies.

Most of the publications and films reviewed here were displayed or discussed at this three-day conference, sponsored by the National Center for Family Planning Services (NCFPS). The main focus of deliberations was on educational efforts in hospital settings. In preparation for the conference, the host, the Westinghouse Population Center, brought together for discussion a sampling of materials used by doctors, nurses, administrators, health educators, coordinators and others actively engaged in public and private birth control programs.

From the American College of Obstetricians and Gynecologists (ACOG) comes an array of professional and popular materials.

For the Professional

Seminar in Family Planning (1972) originated as a conference proceedings but in the editing it was metamorphosed into an authoritative professional manual which medical directors and administrators can be expected to treasure. "What a Family Planning Doctor Should Know and Do" could be the working title of the 101-page, paperbound compendium. Information is organized under these main headings: "Basic Science," "Medical Approaches to Reproductive Regulation," "Infertility," "Problem-Oriented Diagnosis and Treatment" and "Meeting Continuing Needs."

Highlights include Dr. Richard P. Dickey's comprehensive and clear study of the pill and Dr. Helen B. Barnes' refreshingly brief and close-packed paper on taking the patient's medical history, physical and laboratory testing, and problem identification. Dr. Hugh J. Davis' study of intrauterine devices gives a somewhat higher rating to the Dalkon Shield than recent studies seem to support, but his general discussion of the history and subsequent development of the IUD, its advantages and disadvantages, its efficacy and the technical aspects of insertion are informed and useful.

Purchase price, $5 per copy from Ms. Florence Aldridge, ACOG Publications, One East Wacker Drive, Suite 2700, Chicago, Ill. 60601.

For the Family Planning Consumer

ACOG's patient-level publications in the family planning field were prepared in cooperation with *Redbook* magazine, and combine the expertise of the specialist physician with the communications know-how of a mass circulation magazine for women.

Of the more than 70 ACOG-*Redbook* publications in this series, four are reviewed here.

- *What's Sure Besides the Pill?* (1970), by Celso-Ramon Garcia, M.D., one of the developers of the pill and Professor of Obstetrics and Gynecology at the University of Pennsylvania's School of Medicine, reviews very briefly the physiology of reproduction and then moves on swiftly to touch on all contraceptive methods.
- *What Can Be Done to Cure Infertility* (1969), by Herbert H. Thomas, M.D., of the Medical College of Alabama, would probably be welcomed by couples having difficulty in conceiving a child since this booklet explains that in a considerable percentage of cases infertility can be reversed. It is not, however, quick and easy reading.
- *Is Pregnancy the Time to Think about Spacing Children?* (1969), by Schuyler G. Kohl, M.D., of New York's Downstate Medical Center, answers the question affirmatively and goes on to say why. He identifies and assesses the choices of family planning methods. This is a recommended item for free distribution in obstetricians' offices and hospital maternity rooms.
- *The Question of Sterilization* (1971), by Walter M. Wolfe, M.D., of the University of Louisville School of Medicine, covers both male and female operations. Except for an initial sentence associating sterilization with concern for "the dangers of overpopulation"—as though this is the main reason for sterilization—this also could be a helpful folder for the doctor's office and the hospital reading racks.

Small print weakens the booklets' invitation to learning. But the ACOG sponsorship, the expertise of the doctor-authors and the relevance of the titles should put these high on health educators' lists.

For the complete list of booklets write to ACOG, address above. Virtually the entire *Redbook* series is in uniform size and format (3⅛" × 5⅞"). The booklets are priced to sell in substantial volume: 20 for $1.50 is, for example, the minimum listed. However, buyers may choose assorted booklets and still benefit by the volume price if they order at least 20. Unit cost drops to five cents for orders of 1,000.

Hospital Audio Tapes

Since family planning services for the patient who has just delivered was the NCFPS-sponsored conference's central theme, special interest attached to an ACOG project testing the teaching effectiveness of audio-cassettes made for this purpose by ACOG member Ronald J. Pion, M.D., a Honolulu Public Health School Professor gifted in showmanship and experienced in radio-TV health education.

The tapes are being used by postpartum patients in hospitals in Buffalo, New York; Washington, D.C.; Jackson, Mississippi; Chicago, Illinois; Portland, Oregon; Riverside, California; and Honolulu. Whether patients like to use them and learn from them, and whether hospitals find them efficient, is now being assessed by Louise B. Tyrer, M.D., ACOG's Director of Interconceptional Care Programs.

The quite simple procedure is to offer cassettes and a recorder to a postdelivery patient. She listens, through earphones, to one or all, as she wishes.

Any hospital can experiment with these tapes without charge and without being in the test program, and the free trial seems well worth accepting. Maternity services should find the tapes interesting whether they buy or not. Here are the titles:

- *Mother and Baby* (15 minutes). After reviewing the delivery, the tape provides guidance to the mother on bottle feeding, how to handle the umbilical stump, what circumcision is, and highlights the importance of physician consultation on when to resume normal activities, including sex.
- *Conception and Contraception*. The longest tape (32 minutes), covers all the methods of family planning.

• *Permanent Contraception* (nine minutes). Deals with both male and female sterilization.

• *Breast-Feeding* (12½ minutes). No surprises, but provides useful information such as how long it usually takes a baby to become an expert feeder, how the mother can avoid breast soreness, and emphasizes the importance of consultation with a physician before beginning pill use.

• *Sexual Responsiveness* (eight minutes). Here, Dr. Pion's comfortable manner in discussing aspects of sexual behavior that many enjoy but most are shy about discussing may be popular. The message comes from an obstetrician-gynecologist and is heard privately through earphones. It provides sex education in an acceptable and unique way.

• *Going Home* (16 minutes). Baby care, sexuality, postpartum.

The set's 40-page accompanying, illustrated booklet is disappointing. Text on the inside back cover confuses individual desires for family planning with population growth pressures. A list of books for further reading is heavy with matter either too difficult for most new mothers or inappropriate, like Paul Ehrlich's *The Population Bomb*.

For a free trial of the cassettes, write to Pfarrago Information Systems, 4760 22nd Avenue, N.E., Seattle, Wash. 98105. Purchase price, from the same source, for the set of six cassettes and 100 copies of the booklet is $240. (A recorder and attache case to hold it all is another $60.)

The same source also has a set of Pion-made family planning teaching cassettes for general use in clinics and doctors' offices. Separate cassettes deal with each method, and with such topics as sexual responsiveness, the pelvic examination and commonly asked questions about sex, among others. Clinics might use these tapes to simplify teaching and reduce the staff teaching investment.

A choice of 12 out of 16 cassettes may be made at a purchase price of $195. A free preview (or prehear) is offered.

Closed Circuit TV

Sigrid G. Deeds, Conference Director, reporting on the Westinghouse study of family planning education, noted a modest beginning in closed circuit hospital TV teaching of patients. She explained that the technique is usually limited to professional staff.

Kapiolani Hospital, where Dr. Pion is a staff member, is a happy exception, and the physician reported to the conference on its TV program, telecast into 141 rooms. Patients may tune in to taped

health education, offered on a three-day-a-week cycle, or they may pass it by for more familiar entertainment. Most choose some of the recorded video tapes on family planning, breast self-examination, formula preparation, vasectomy, bathing the new baby, and like subjects, the doctor said. Family planners in hospitals with closed circuit TV might try to emulate this.

Sixteen mm films can be transferred to video cassette without great cost or difficulty. A time slot on the closed circuit can be requested, since this is seldom booked tightly.

Harlem Hospital's Film

Ideal for this purpose may be the four-star film tailor-made for maternity row by New York's Harlem Hospital and shown at the conference. *A Matter of Choice* (20 minutes, color), was created for closed-circuit TV, and its first version was for use with a responsive teaching machine. The new mother watches the film on TV. Periodically, the showing pauses and the viewer is quizzed on what's been taught. Push buttons permit her to answer. If her reply is wrong, she is given the correct answer. Harlem Hospital reports success with this method, but few hospitals have this expensive equipment. Donald P. Swartz, M.D., when he was Harlem Hospital's ob-gyn chief, supervised the production of this good educational film which, happily, is avilable in 16 mm film and cartridges.

Video cassettes can be ordered from Dr. Swartz, now Professor and Chairman, Ob-Gyn Department, Albany Medical Center Hospital, 47 New Scotland Avenue, Albany, N.Y. 12208. Price depends on video format and whether buyer or supplier provides the tape. In no case would the cost be above $175.

Planned Parenthood sells and rents the films. Price of the 16 mm or eight mm versions for Technicolor and the eight mm cassette for Fairchild Super-8 projectors is $115. Rental is limited to the 16 mm version and costs $12.50 for one day. Send orders for purchases to Planned Parenthood Publications, 810 Seventh Avenue, New York, N.Y. 10019. Send rental orders to Planned Parenthood Film Library, 267 West 25th Street, New York, N.Y. 10001.

For the Medical Professional

Methods of Birth Control in the United States (1972) is a briefer (41 page), easier-to-use professional guide than the ACOG manual referred to earlier. A publication of Planned Parenthood's National Medical Committee, it covers criteria for choice of methods, examines all methods and reviews each for contraindications, mechanism of action, effectiveness and acceptability.

Like the ACOG manual, this offers a selected bibliography. Included also is a separate contraceptive product list which is revised more frequently than the manual. Fast-breaking developments in the field are such that this new edition already requires updating to include progestogen-only minipills, approved by the FDA since publication (see p. 4).

Purchase price, single copy, 75¢; 50 copies for $35; 100 for $65, from Planned Parenthood Publications, address above.

Training Paramedical Personnel

Film—*Family Planning: More Than a Method* (27 minutes, black and white). This New Careers film shows paramedical staff in training and at work teaching family planning. Filmed on location in a large county health department, the people and the situations come across as real. The film identifies obstacles to effective use of family planning and problems patients face, and portrays both strong and weak points in training. A discussion guide is provided. The movie, produced under a grant from the Office of Economic Opportunity, is suitable for the general public, community groups, educators and potential patients as well.

Purchase price, $61.25, from the National Audio-Visual Center, Washington, D.C. 20409. Rental, $10, from PP-WP Film Library, 267 West 25 Street, New York, N.Y. 10001.

Note—Readers are urged to send their own materials for review. Send two copies of each item; define the intended audience and goal, state the price and how *Digest* readers may obtain copies. Contributions should be addressed to:

Resources in Review
Family Planning Digest
Room 12A-33
5600 Fishers Lane
Rockville, Md. 20852

Postcoital Pill

FDA Approves DES, Urges Limited Use

On recommendation of its Advisory Committee on Obstetrics and Gynecology, the Food and Drug Administration (FDA) recently approved the use of diethylstilbestrol (DES) as a 'morning-after' pill to prevent conception. Dr. Charles C. Edwards, FDA Commissioner, urged that DES, a synthetic estrogen, "be considered as an emergency treatment only and that it . . . not be considered as a method for birth control with continuous and frequently repeated therapy." Limitation of its use was urged because the drug, available for many years for treatment of gynecological and other disorders, has been associated with development of vaginal cancer in the daughters of women who had been given the drug in large doses for prolonged periods to prevent miscarriage. [See: "1,000 Women Use Postcoital Pill: No Babies," *Digest*, Vol. 1, No. 2, 1972, p. 4.]

A roundup of 10 years of experience with morning-after administration of DES and other estrogens to humans and macaque monkeys, has shown the treatment to be a successful method of preventing pregnancy with almost no serious side effects, according to a team of Yale University Medical School researchers who pioneered their use for this purpose. Dr. John McLean Morris and Gertrude van Wagenen, reporting in a recent issue of the *American Journal of Obstetrics and Gynecology*, note that in over 9,000 human mid-cycle exposures treated with estrogens, only 29 pregnancies occurred—and all but three of these could be attributed to mistimed administration or insufficient doses of the hormones. In the monkeys, there were 11 pregnancies in 658 treated cycles. Almost all of these occurred when the dosage was low: less than five mg of estrogen per day over the normal five or six days of treatment (equivalent to about ten times that amount in women).

Dr. Morris and van Wagenen assessed the results of many published and unpublished treatment series of women using DES, stilbestrol diphosphate (SD), ethinyl estradiol (EE) and/or conjugated estrogen (CE, in the form of Premarin), plus their own work with the macaque monkeys, in which six different estrogens were tried. In the monkeys, only two pregnancies (0.6 percent) occurred in 341 treated cycles (none in 308 cycles when estradiol is excluded) when at least five mg of estrogen was given daily, compared with 55 pregnancies in 267 cycles (20.6 percent) in untreated monkeys. In the women, the 29 pregnancies represent 0.3 percent—and the three that could not be attributed to incorrect administration come to only 0.03 percent—of the cases. This contrasts with the 1960 estimates of Dr. Christopher Tietze of The Population Council of a one in 25 to one in 50 chance of pregnancy for a single unprotected coital act, and the estimate of J. Richard Udry of the University of North Carolina at Chapel Hill of one chance in ten for unprotected acts in mid-cycle (as were most of those in the 9,000 cases).

Only Three Method Failures

Of the 29 treated women who became pregnant, one was given insufficient doses of CE. Thirteen others were given EE, with nine of them receiving low doses. In the other four cases, timing was at fault —either the treatment was given well beyond the midpoint of the menstrual cycle or there had been more than one instance of intercourse and an uncertain time of ovulation. Fifteen pregnancies were reported among women given DES or SD, eight with low doses, four with timing problems in the treatment and, finally, the three cases which the researchers attributed to failure of the estrogen to "intercept" the fertilized ovum.

Untoward effects were minimal. There were three tubal pregnancies out of the 29—which is well above the normal one in 300 to one in 1,200 cases. But, the researchers noted, the number of pregnancies that would normally have been expected to result from 9,000 single instances of unprotected intercourse falls right in the 300 to 1,200 range, and since the estrogen treatment works by preventing implantation of the fertilized ovum in the wall of the uterus, extrauterine pregnancies probably would not be affected. The only serious side effect was a case of acute pulmonary edema in a Miami University coed with a history of fluid retention. The case was completely cleared within 36 hours. Nausea, while common, was found to be relieved either by giving the estrogen in a specially coated pill so the stomach would be bypassed, or by giving the patients a mild tranquilizer along with the hormone. Breast soreness, menstrual irregularity, headaches and dizziness were less common complaints.

Because of reports linking prolonged administration of DES to pregnant women during their first trimester with the occurrence of vaginal cancer at puberty in their children, van Wagenen and Dr. Morris also studied the offspring of some 50 macaque monkeys they had treated with estrogens for various periods during pregnancy. So far, they said, "no abnormalities have been noted . . . but . . . the period of observation of female infants may be inadequate."

Despite the apparent success of morning-after estrogen treatment so far, they emphasized that it must be considered an "emergency" procedure, and they urged that women with "a continuing need for contraception . . . be provided with other methods of contraception." Doctors administering postcoital estrogen should try to confirm that the patient is in mid-cycle, they advised, and, if possible, should test for motile sperm before giving her the estrogen. Especially with "very young" patients, who seek treatment "after their first or second sexual contact," contraceptive and psychological counseling are also vital.

Sources

C. C. Edwards, Commissioner, Food and Drug Administration, testimony before the Subcommittee on Health of the Senate Committee on Labor and Public Welfare, Feb. 21, 1973.

J.M. Morris and G. van Wagenen, "Interception: The Use of Postovulatory Estrogens to Prevent Implantation," *American Journal of Obstetrics and Gynecology*, **115**:101, 1973.

C. Tietze, "Problems of Pregnancy Resulting from a Single Unprotected Coitus," *Fertility and Sterility*, **11**:485, 1960.

Family Planning

Canadian Government Sponsors Programs

The Canadian government will make more than $1 million in grants available for the support of family planning projects in 1973, John Munro, Minister of National Health and Welfare, told a recent meeting of the National Conference of Family Planning.

The Conference, called to determine the need and means for providing family planning in Canada, concluded with the decision to investigate the possible ways of introducing family planning facilities into the existing network of medical care delivery of the Canadian National Health Service. Until 1969 it was a criminal offense in Canada to sell, advertise or distribute contraceptives or to instruct in their use. In 1969 this legislation was amended, and family planning is now legal and enjoys federal government support.

Sources

"Family Planning in Canada," *Journal of the American Medical Association*, **220**:736, 1972.

"Situation Report: Canada," International Planned Parenthood Federation, London, May 1971 (mimeo).

Fertility

U.K. City Findings Parallel U.S. Results

In a major city in Britain, as in the United States nationally, there has been a sharp drop in unwanted conceptions between 1965 and 1970; young married couples of all religious and socioeconomic groups have revised their family size desires downward; and the practice of contraception is almost universal, enabling the couples to achieve the family size they say they want.

These are among the main findings of a study of family planning in the first five years of marriage conducted in the city of Hull, and reported by John Peel in the *Journal of Biosocial Science*. In 1965-1966, 350 newlyweds were interviewed about their expectations of family size and their personal use of contraception. In 1970-1971, 312 of the same couples (89 percent) were reinterviewed; the opinion of the wives was recorded and all but 41 (who answered by mail) were interviewed personally.

Asked as newlyweds, and again in 1970, how many children they intended to have, the couples revealed a marked downward revision in intended family size from an earlier expectation of 2.6 children to 2.2 children. The 312 couples had originally wanted a total of 813 children; the downward revision occurring in the first five years of marriage gives a projected total of 697 children. These findings, Peel observed, stand "in sharp contrast to previous comparable studies where, with actual experience of childbearing, wives have been found to raise their fertility expectations." (In the United States, a study published in 1966 reported that over a five-year period, women upgraded family size expectations by six percent. Between 1965 and 1970, however, a report derived from the National Fertility Studies (NFS) of those years found "a substantial downward revision of future intended births had occurred," and was particularly marked for young married couples who wanted an average of 2.5 children. [For further details, see: "1970 National Fertility Study," *Digest*, Vol. 1, No. 6, 1972, p. 9.])

In all, 106 of the 312 couples revised their family-size intentions downward, compared to 31 couples who wanted larger families. Among the couples who wanted fewer children, 55 couples said they did so because of economic hardship, 20 couples gave health reasons and 11 said the work involved in raising children was too hard. The biggest single reason for upward revision in intended family size was accidental pregnancy—14 of the 31 couples. Seven couples said that they had not achieved their desired ratio of boys to girls and five said they just liked children more than they thought they would.

The researchers also found that differences in intended family size among various socioeconomic groups in 1965 tended to disappear by 1970, and in all groups there was a downward revision, as in the United States. In 1965, couples in both the highest and lowest socioeconomic brackets wanted more children (2.8 and 2.7, respectively), than did the middle classes (an average of 2.5). By 1970, however, the upper and lower groups had revised their intentions downward to 2.22 and 2.17, respectively, compared to 2.19 for the middle groups. In 1965, couples with more educated husbands wanted larger families than couples with less educated husbands, but this difference had almost disappeared after five years of marriage. Religion as a factor in intended family size also tended to diminish in the five-year period: In 1965, Catholics said they wanted 30 percent more children than non-Catholics, but by 1970, they wanted only eight percent more.

In regard to actual family size—as opposed to intended family size—the researchers found that in the five years elapsing between marriage and the second interview, the couples' family building was achieved less rapidly than the couples themselves anticipated. At the end of five years, the couples had an average of 1.51 children compared to a projected average, based on spacing intentions expressed at first interview, of 1.76 children. By mid-1970, the couples had had only 57 percent of the total expected births compared with 70 percent predicted at the time of marriage. Actual births were at considerably shorter intervals than the couples originally predicted: a mean of 24 months, compared with an anticipated 28 months between first and second births, and of 20 months compared with a preferred 27 months between second and third births. The largest group (129 couples) had two children, the second largest (105) had one child, 43 couples were childless, 32 had three children and one couple had four.

By the second interview, 93 percent of the couples had used some form of contraception during marriage (compared with 88 percent of comparable U.S. married couples); 52.8 percent had done so before the first pregnancy and 75.4 percent before the second. These findings suggest, according to Peel, that "the recently married couple could be viewed as a rational decision-taking unit in terms of family-building intentions" and that "couples are now having the families they want rather than making the best of what they get. . . ."

Unwanted Pregnancies

Peel reports that about two-thirds of the 577 pregnancies in the five-year period were *planned*, and compares this with a study made in the early 1960s which found that two-thirds of all pregnancies occurring in the first five years of marriage were *unplanned*. (In the United States, the rate of unwanted childbearing dropped by 36 percent between 1965 and 1970.) The Hull study found that "a very high proportion"—70 percent—of first pregnancies were planned, and almost as high a proportion—66 percent—of second pregnancies were planned. Subsequent pregnancies had higher proportions unplanned, with 50 percent of fourth and 56 percent of fifth unplanned. Peel maintains that "contraceptive failure is a relatively unimportant component of unintended pregnancies."

The leading contraceptive methods currently or last used by respondents were the condom and the pill, each chosen by about one-third of the couples, and withdrawal, the choice of about one-fifth of them. Although two-thirds of the couples use the methods with the lowest failure rates, a substantial proportion, more than one-quarter, used those with the highest failure rates. (The three methods most widely used by younger married couples in the United States in 1970 were the pill, the condom and the IUD, with withdrawal the least commonly practiced. One-year failure rates for the various methods were somewhat different from the Hull rates. According to the 1965 NFS, failure rates by method were: pill, four percent; condom, 16 percent; diaphragm, 18 percent; withdrawal, 21 percent; and rhythm, 28 percent.)

Peel concludes from the Hull study that recently married young couples make rational decisions regarding family size and implement their decisions by using effective family planning. He observes that the stereotype of the 'pathological childbearer' is a myth.

Sources

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Postpregnant Service

Vasectomy Clinic Run by Ob-Gyns

Will men go to a women's hospital for vasectomies? The answer from Magee-Women's Hospital in Pittsburgh is 'yes': 232 men from a four-county area had vasectomies there in the first year of a new program, and one-third of them had "postpregnant vasectomies," according to Dr. Douglass S. Thompson, Director of Community Health at Magee and Clinical Associate Professor of Obstetrics and Gynecology and Community Medicine at the University of Pittsburgh School of Medicine. He reported on the vasectomy service at the centennial annual meeting of the American Public Health Association held in Atlantic City, New Jersey.

The physician, who directs the vasectomy service, said it had been established (in August 1971) because "We felt a keen need and desire to provide family planning services for the men associated with our women patients, particularly our postpartum patients. The creation of a vasectomy program complementary to the . . . tubal ligation service seemed to offer an excellent way to fulfill some of these needs and desires." In addition to some 6,700 deliveries and 1,700 legal abortions a year at Magee, about 1,200 ligations are performed, 550 of them postpartum.

With the cooperation of the medical school's Department of Urology, whose attending physicians and residents perform the surgery, and the School of Social Work, whose students assist in the counseling, a clinic is held one afternoon a week in the prenatal care facility, which is not in use at that time. Six outpatient vasectomies can be accommodated each week.

At its inception, the vasectomy service was "the only such program in a county of one-and-a-half million people," Dr. Thompson said, and information about it was disseminated initially by means of a letter sent to all physicians in the Department of Obstetrics and Gynecology, along with single-page flyers for patients.

Local newspapers and television stations were told about the program and these gave it "fairly extensive publicity," resulting in at least a "momentary increase" in consultation appointments as stories were used, according to the physician, and some surgery cancellations when adverse stories were carried by the media.

Thirty-one of the 68 men who had vasectomies six months before or after resolution of their partners' pregnancies were referred by their partners' obstetrician. The remainder were referred by other health care providers or came in as a result of publicity. A profile of the 68 men showed the following:

- Their average age was 33 years, with a range of from 20 to 51.
- All but one had children; each of the 67 had an average of 3.3 living children, ranging in age up to 24 years.
- All but two of the men were married, and the average duration of the marriage was 7.6 years. Several were second marriages for one or both partners. One of the two unmarried men had two children and said he had been involved in several therapeutic abortions. The other was childless, and he and his fiancee were certain they wanted no children, ever. This man, too, said he had been involved in an abortion.

The major reason most of the couples sought vasectomy was that they wanted to terminate childbearing. A few had medical concerns.

Most of these couples had used contraception prior to or following the pregnancy. Twenty had used the pill or the IUD and 37 the condom, foam, diaphragm, coitus interruptus or rhythm, eight were not using contraception and there was no information about the remaining three. Many of the couples had considered tubal ligation, but had rejected it because of the expense, because they considered vasectomy a simpler operation, or because the man felt that his partner "already had had a disproportional share of medical (i.e., obstetric) procedures or because the woman's obstetrician was opposed to the operation," Dr. Thompson reported.

Sixty of the 68 men were private patients, of whom most had insurance which covered their vasectomies, and eight were nonprivate patients who received financial assistance either through the Family Planning Council of Southwestern Pennsylvania or Medicaid, or were service patients of the hospital. All of the men were white.

Although the ratio of postpartum tubal ligations to postpregnancy vasectomies was 18 to one, Dr. Thompson concluded, "the roles of a department of obstetrics and gynecology and of a maternity hospital in initiating this outpatient vasectomy arrangement represent . . . excellent examples of the expanding concerns of obstetricians. It is most appropriate for them to provide care for the partners of their women in this and other ways."

Source

D.S. Thompson, F.N. Schwentker and E.H. McCullough, "Postpregnant Vasectomies," paper presented at the centennial annual meeting of the American Public Health Association, Atlantic City, N.J., Nov. 15, 1972.

Philadelphia Study

Nurses Favor Giving Birth Control Facts

Three out of four public health nurses surveyed in the Philadelphia metropolitan area believe that nurses should give family planning information to anyone who wants it, regardless of age or marital status, and a majority of Catholic and non-Catholic nurses believe such information should be provided regardless of the nurses' own personal convictions regarding contraception. Less than half, however, think that a public health nurse should initiate discussion of birth control if she believes it will conflict with a patient's personal beliefs. Younger nurses (under 30 years) are better informed about birth control and are more favorably disposed toward it than are older nurses.

These are some of the conclusions of a 1970 mail survey of the family planning knowledge, attitudes and practices of public health nurses in the Philadelphia metropolitan area. A total of 310 questionnaires were sent to nurses making home visits, and 234 questionnaires (75.8 percent) were returned. Twenty-seven public health agencies participated in the project.

Detailed findings of the survey include the following:

- While Catholic nurses were generally less well informed about birth control than were non-Catholic nurses, married Catholic nurses and married non-Catholic nurses were equally knowledgeable about birth control.
- Nurses who had used contraception had a better knowledge of birth control methods than those who had not, suggesting, according to the investigators, "that personal use of an artificial method contributes to one's general knowledge of birth control methods."
- About 95 percent of the nurses felt that single as well as married nurses should be expected to discuss birth control with patients.
- Seventy-eight percent of nurses said they would discuss most contraceptive methods with patients requesting birth control information, but a substantial proportion, 20 percent, said they would not discuss contraception but would provide a pamphlet or refer a patient elsewhere for information. Two percent said that they would discuss only what they, the nurses, considered the best method for the patient, but none said that they would refuse to discuss birth control entirely.
- The largest proportion of nurses (45 percent) felt that a public health nurse's role in birth control teaching is to "assess and

inquire about family planning status and needs in almost every home." The second largest group (35 percent) said a public health nurse should "discuss family planning routinely with all postpartum patients, regardless of age or marital status." Two percent believed a public health nurse should discuss family planning "routinely" only with married postpartum patients, and the same percentage believed family planning information should be provided only with a physician's permission.

The age of the nurse was the most significant variable insofar as knowledge of contraception is concerned, with nurses 30 years old and younger achieving higher scores than those over 30. The investigators believe this may be due, in part, to the fact that family planning has only relatively recently been included in the nursing curriculum, and younger nurses are more likely to be current users of contraception. They may also reflect "the changing attitudes regarding sexual relationships and the expanding role of women in society."

Source

J. Howard, J. Lawrence and K. Rasile, "A Survey of Public Health Nurses' Knowledge and Attitudes about Family Planning," *American Journal of Public Health*, **62**: 962, 1972.

Age, Parity Decline In Sterilized Women

A sharp decline since 1969 in the age and parity of women undergoing tubal ligation in a major St. Paul hospital, and a marked increase in the ratio of ligations to live births since that time, were attributed by two of the hospital's physicians to abandonment of age, parity and marital status barriers to voluntary sterilization. In a series of 1,150 ligations performed from 1958 to 1971, Drs. Laura E. Edwards and Erick Y. Hakanson report in the *American Journal of Obstetrics and Gynecology*, a comparison of those performed in the period 1958-1967 with those performed in 1971 shows that:

- the percentage of patients younger than 25 rose from 3.5 percent to 32 percent;
- the average age of the patients fell from 32 years to less than 30 years;
- the average number of living children fell from 6.5 to 3.6.

The ratio of ligations to deliveries at the hospital increased from one in 17 during the 1958-1967 period to one in four in 1970-1971, "higher than any reported to date in the English literature," the authors note, adding that in the first quarter of 1972, the ratio reached a new high of one ligation for every 3.6 deliveries.

The percentage of women in the series 30 years of age or older dropped sharply: In 1958-1967 they accounted for 69 percent of those undergoing the operation; this fell to 36 percent in 1971, and to 28 percent in the first quarter of 1972. The percentage of women under 25 climbed during this period—from 3.5 percent in 1958-1967 to 32 percent in 1971. The number of living children declined by 45 percent—from an average of 6.5 per woman in 1958-1967 to 3.6 in 1970-1971. The percentage of women with three or fewer children, which ranged from one to 15 percent for the years 1958-1967, jumped to 40 percent of the patients in 1971, while the percentage of those with seven or more children—who accounted for 67-85 percent of the total during the years 1958-1967—plummeted to 15 percent in 1971.

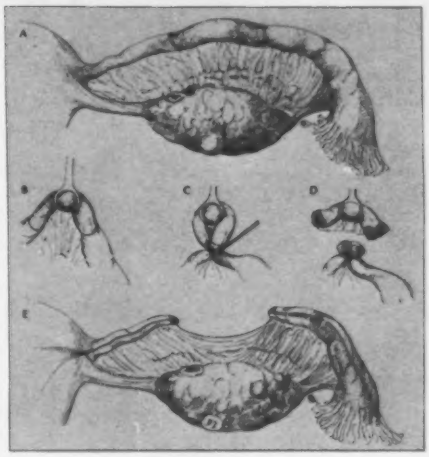
The change, the authors said, reflects an evolution in policy of "not discriminating on the basis of age, parity or marital status against any patients requesting voluntary sterilization." (Until 1969, the American College of Obstetricians and Gynecologists had "suggested" in their official manual that elective sterilization not be performed except at specific age-parity combinations—e.g., age 30 with four children. Most hospitals followed these suggestions.)

In the 1,150 cases, there were two known failures. There were no deaths. The total morbidity and complication rate was 10 percent, but only 2.6 percent were serious complications. These major problems—including thromboembolism, hematoma and hemorrhage—were exceptionally prevalent in two situations: vaginal sterilizations following therapeutic abortion (five of 15 cases) and sterilization accompanying cesarean section (five of 70 cases). In vaginal interval operations —those not immediately postpartum or postabortion—there were 11 serious complications in 278 cases, and in postpartum abdominal ligations there were nine such cases out of 752.

Because of the high complication rate

Table 1. Mean age of women undergoing tubal ligation, mean number of living children and ratio of ligations to deliveries, 1958-1971

	Age of patient				*# of children*	*Ligations/deliveries*
	Mean	*% < 25*	*% 25-30*	*% > 30*		
1958-1967	32.1	3.5	27.5	69.0	6.5	1:17.4
1968-1969	30.2	13.1	41.4	45.5	4.5	1: 9.2
1970		19.7	38.1	52.2		1: 4.3
1971	29.7	31.7	32.2	36.1	3.6	



Pomeroy procedure, main method used in this series.

associated with vaginal operations following abortions found in this series, and similar results reported by other physicians, the authors "feel that the procedure is contraindicated under these circumstances."

"Like all surgical procedures," they add, "tubal sterilization is accompanied by a definite risk of morbidity and complications. However, the order of this risk suggests that it is acceptable in terms of the risk of repeat [unwanted] pregnancy. . . . In this context, we feel that it is our responsibility to make this procedure as easily available as possible to all women without prejudice."

During the 14 years of the series, the reasons for ligation remained fairly stable, they note. Eugenic reasons (mental retardation) accounted for three percent in 1958-1967 and four percent in 1970-1971 (relatively high, the authors state, because "some patients were referred to this hospital strictly for sterilization"); medical causes, including obstetric and psychiatric, contributed more than 30 percent of the cases in 1958-1967 and 22 percent in 1970-1971; and voluntary sterilization made up 66 percent in 1958-1967 and 74 percent in 1970-1971. While a large number of sterilizations were voluntary throughout the series, "this decision by the patient and the physician occurred at a significantly higher age and parity in the earlier years of the study."

Source

L.E. Edwards and E.Y. Hakanson, "Changing Status of Tubal Sterilization: An Evaluation of Fourteen Years' Experience," *American Journal of Obstetrics and Gynecology*, **115**:347, 1973.

Credits

p. 1: D.M. Rorvik and L.B. Shettles, from *Your Baby's Sex: Now You Can Choose*, Dodd, Mead; p. 2: M. Dreiwitz, Planned Parenthood-World Population; p. 4: Guy Crowder; p. 5: Mike Firpo; pp. 7, 10: Ken Heyman; p. 9: Camera Arts Studio; p. 11: Don Guy; p. 15: Carol Woike, courtesy of *Hospital Practice*.

Family Planning Digest

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Family Planning Job Opportunities

Family planning agencies are invited to send job opportunity statements for professional positions to:

National Center for Family Planning Services
HSMHA, DHEW
5600 Fishers Lane, Room 12A-33
Rockville, Maryland 20852

The National Center for Family Planning Services, HSMHA, does not necessarily support the agencies seeking to fill positions.

All openings listed below are with Equal Opportunity employers.

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Position: Program Director
Agency: Albany County Family Planning Service, Inc.
Location: Laramie, Wyo.
Salary: Commensurate with capabilities
Job Description: Direct existing programs and clinic; be responsible for grant-writing and program planning; supervise staff; handle public relations to increase program acceptance; direct community involvement in the program and community outreach.
Qualifications: B.A. with experience in administration, working with low-income people and with paramedical work.
Contact: Personnel Committee, Albany County Family Planning Service, Inc., 318 South Second Street, Laramie, Wyo. 82070

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Position: Physician
Agency: Vermont Women's Health Center
Location: Colchester, Vt.
Salary: Negotiable
Job Description: Work with other members of health team to plan, develop, implement and evaluate services in family planning, contraception, pregnancy detection. Emphasis on primary care, education and counseling. Possible expansion plans include outpatient tubal ligation, vasectomy, prenatal care for natural childbirth and home delivery.
Qualifications: Background in planning, developing, providing services in women's sexual and reproductive health and family planning; desire and ability to relate to women on a one-to-one basis emphasizing education and prevention; flexibility in working as member of health team. Special skills which would be helpful include outpatient tubal ligations, obstetrics. Preference will be given to a candidate certified in ob/gyn, but other candidates will be considered. Vermont licensure or eligibility required.
Contact: June Aschenbach, Personnel Committee, Vermont Women's Health Center, Box 29, Burlington, Vt. 05401. Telephone: 802-655-1600

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Position: Director, Department of Community Affairs
Agency: Planned Parenthood-World Population
Location: New York City
Salary: Open
Job Description: Coordinate the work of the department in the special areas of intergroup and human relations, interorganization relations, youth and student affairs, and religious affairs. Work with national board volunteers, national staff and 191 affiliates to develop and carry out programs to assist PP-WP's work with special groups: consumers, other health and welfare agencies, and minorities.
Qualifications: Minimum of five years' professional employment in administration, community organization, social welfare, family planning or public affairs. Ability to relate to professionals and volunteers.
Contact: Roberta Wald, Personnel Department, Planned Parenthood-World Population, 810 Seventh Avenue, New York, N.Y. 10019

•

Position: Physician
Agency: Planned Parenthood/Western Missouri and Kansas
Location: Kansas City, Mo.
Salary Range: $10,000-$15,000
Job Description: Physician (12-20 hours a week at outset) to provide medical supervision of clinicians in contraceptive and vasectomy clinics. Deliver medical services in some clinics. Will be responsible for medical staffing and training clinicians for clinics now in operation and those projected, including female sterilization. Work with Medical Advisory Committee in establishing medical policy. Salary and working hours adjusted to meet projected expansion.
Qualifications: Ob/gyn or GP M.D. licensed to practice in Missouri. Experience in laparoscopy desirable. Experience in community medicine; some administrative background.
Contact: Patricia Smith, Planned Parenthood/Western Missouri and Kansas, 4950 Cherry, Kansas City, Mo. 64110

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Position: Training Coordinator
Agency: Planned Parenthood of Columbus, Ohio, Inc.
Location: Columbus, Ohio
Salary: Open
Job Description: Under supervision of Training Center's Program Director, is responsible for reviewing requests for in-service training; assessing training needs; defining objectives, content and selection of curriculum and training materials; scheduling and arranging for appropriate training setting and training aids; evaluating training objectives and programs. Out-of-town travel on a regular basis.
Qualifications: Understanding of the principles of program planning and evaluation and program coordination.
Contact: David C. Johnson, Ohio Family Planning Training Center, Southern Hotel, Room 202, Columbus, Ohio 43215

•

Position: Manager, Family Planning Program
Agency: Planned Parenthood Association of the Southern Mountains, Inc.
Location: Oak Ridge, Tenn.
Salary: Open
Job Description: Direct responsibilities for the program, management of a staff of about 25 and volunteers, general office administration, fiscal management, community and government agency relations. The program is expanding into six rural Tennessee counties. Will report to the Board of Directors of Planned Parenthood Association of the Southern Mountains, Inc., a private organization.
Contact: Ralph Zahn, Planned Parenthood Association of the Southern Mountains, Inc., P.O. Box 88, Oak Ridge, Tenn. 37830

•

Position: Executive Director
Agency: Delaware League for Planned Parenthood, Inc.
Location: Wilmington, Del.
Salary: Open
Job Description: Work with Board of Directors to develop and review policy in setting the direction of the affiliate, to plan and develop funding sources and human resources. Manage the entire program, develop a statewide family planning project in cooperation with the state health department, while encouraging participation of other health service providers. Assure high standards and practices in all areas of the operation.
Qualifications: B.A. and a minimum of three years of related administrative experience. Administrative experience, sufficient in scope and depth, with demonstrated performance, will be considered in lieu of academic requirements.
Contact: Mrs. Wagner D. Jackson, 825 Washington Street, Wilmington, Del. 19801

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